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| EXAMINER | |
|---|---|
| SCHWARTZ, JORDAN MARC | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/592,920 | IWASAWA, YOSHITO | |
| | Examiner | Art Unit | |
| | Jordan M. Schwartz | 2873 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *26 May 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Specification*

The specification is objected to for the following reasons:

Throughout the specification applicant states that there is a "first group" and a "negative group at an object side..." which implies two separate groups. However, this is inconsistent with the figures which disclose the negative most object side lens element as part of the first group and not as a separate group. For clarity, in the specification, page 3, line 3, after "negative group" it is suggested that applicant insert "(being a negative subgroup of the first group)" to provide clarity.

In the specification, page 9, last paragraph, the specification states that "Figure 14A is a cross sectional view including optical path bending... In this state, the reflection mirror M...is withdrawn". However, Figure 14A apparently discloses the mirror within the optical path while Figure 14B discloses the reflection mirror in the withdrawn state. Further clarity and consistency is required.

### *Claim Rejections - 35 USC § 112*

Claims 1 and 3 (and therefore dependent claims 2 and 4) are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant is now claiming that the

"reflection member is withdrawn in parallel to the optical axis" which is not supported by the specification and figures as originally filed and therefore presents prohibited new matter. Specifically, the only figures that show the mirror being withdrawn are figures 14A and 14B and neither one discloses the mirror "parallel to the optical axis". The only place in the specification where "parallel withdrawal" is mentioned is page 10, the last line of the first paragraph in which it is stated that "there may be a configuration to move the reflection mirror M in parallel to withdraw the reflection mirror". However, without a further explanation or without any figures to support this statement it is not explained what it is being withdrawn parallel to. It is not known if applicant means "parallel to the optical axis" (as is now being claimed) or "parallel to its initial tilted position" or "parallel to the negative lens subgroup" or "parallel to the second lens group" or if some other meaning is intended. Therefore, the claimed "parallel to the optical axis" presents prohibited new matter (but has been given patentable weight for purposes of examination as if it did not present prohibited new matter).

Claims 1 and 3 (and therefore dependent claims 2 and 4) are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, the specification states that the "in parallel" movement would be by a means other than by the disclosed fulcrum movement but then does not describe the means of providing this in parallel movement and therefore

lacks enablement. Specifically, page 10 describes the fulcrum movement and states that "withdrawal operation of the reflection mirror M is not limited to such implementation… and there may be a configuration to move the reflection mirror M in parallel to withdraw the reflection mirror" but then fails to describe any other means of withdrawing the mirror other than the fulcrum movement and specifically the means to withdraw the mirror "in parallel" therefore rendering the claimed "in parallel" withdrawal as lacking enablement (but has been given patentable weight for purposes of examination as if it did not present prohibited new matter).

***Claim Objections***

Claims 1 and 3 are objected to for the following reason. Since the intended meaning could be determined from what is set forth in the specification and figures a 112 rejection has not been made but instead this lack of clarity issue is being raised in the following objection.

With respect to claims 1 and 3, the claimed "when the zoom lens undergoes a lens barrel sinking operation" is objected to because the claimed lens within a lens barrel and the claimed lens sinking operation lack an antecedent basis. Specifically, if the zoom lens within a lens barrel and the zoom lens being able to undergo a lens barrel sinking operation are intended as limitations (as is herein assumed) then that needs to be claimed with greater clarity and particularity. Specifically, as a suggestion, in claim 1, line 12 it is suggested that applicant claim "wherein the zoom lens is located within a lens barrel and said lens barrel can undergo a lens barrel sinking operation and

wherein, when the zoom lens undergoes said lens barrel sinking operation..." with similar changes to claim 3 to provide the required antecedent basis and clarity.

Claims 2 and 4 are objected to because of the following informality: the claimed "satisfy the following formula" should be corrected to "satisfies the following formula" Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mihara patent number 7,436,599 (Mihara'599) in view of Nishioka patent number 7,301,710.

Mihara'599 discloses the limitations therein including the following: a zoom lens (column 1, lines 10-15, Figures 5 and 17); composed of a plurality of groups adapted to change spacings to thereby perform magnification changing (Figure 5, example 5); comprising a first group including a reflection member to bend or fold the optical axis (Figure 5, example 5, "G1"); a negative subgroup at an object side relative to the reflection member (Figure 5, example 5, the negative lens on the object side of the reflection member); the first group fixed during magnification changing (Figure 5, example 5, column 2, lines 43-67); a second

group movable during magnification changing at an image side of the first group and having negative power (Figure 5, example 5, column 2, lines 43-67, lens group "G4" as negative and moving during zooming); a light quantity adjusting member (Figure 5, example 5, the aperture stop); the zoom lens within a lens barrel (Figure 33, "113", column 35, line 43); the lens barrel undergoing a sinking operation into a zoom lens system body (column 9, lines 1-14); wherein the reflection member is withdrawn in parallel from the optical axis (figures 16 and 17 which disclose the mirror pivoted and moved parallel from the optical axis of lens elements "L2" and "L3"); and the negative subgroup of the first group is accommodated into the space thus vacated by the withdrawn reflection member (column 9, lines 1-14, column 29, lines 29-36, figure 17 with negative lens element of "LG" moved into the space vacated by the mirror). Mihara'599 further discloses the zoom lens system within an image pick-up device to convert the image into an electronic signal (column 1, lines 10-14, column 11, line 55 to column 12, line 6); and the satisfaction of the mathematical condition of claims 2 and 4 (example 5 with fa/fw = 2.44).

Mihara'599 discloses as is set forth above but discloses the light quantity adjustment member i.e. the stop movable and not fixed during magnification. Nishioka teaches that in a zoom optical system comprising a most object side lens group having a reflection member to bend the optical path and further comprising a stop located on the image side of the first lens group (abstract, figures 1 and 11) that the stop can either be movable or can be fixed for the purpose of providing a zoom lens system having a limited fluctuation of the

height of rays with zooming and to provide a system of simpler construction (figures 1 and 11, column 49, lines 1-6). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the zoom lens system of Mihara'599 as having a stop fixed on the optical axis since Nishioka teaches that in a zoom optical system comprising a most object side lens group having a reflection member to bend the optical path and further comprising a stop located on the image side of the first lens group, that the stop can fixed on the optical axis for the purpose of providing a zoom lens system having a limited fluctuation of the height of rays with zooming and to provide a system of simpler construction.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagimori et al patent number 6,754,446 in view of Mihara patent number 7,436,599 (Mihara'599).

Hagimori discloses the limitations therein including the following: a zoom lens (abstract); composed of a plurality of groups adapted to change spacings to thereby perform magnification changing (abstract, figure 3, example 3, column 5, line 49 to column 6, line 4); comprising a first group including a reflection member to bend or fold the optical axis (Figure 3, example 3, abstract, column 8, lines 37-49, "Gr1"); a negative subgroup at an object side relative to the reflection member (Figure 3, example 3, the negative lens on the object side of the reflection member); the first group fixed during magnification changing (Figure 3, example 3, column 5, line 49 to column 6, line 4); a second group movable during magnification changing at an image side of the first group and having

negative power (Figure 3, example 3, column 5, line 49 to column 6, line 4); a light quantity adjusting member fixed during magnification changing (Figure 3, example 3, the aperture stop, column 5, line 49 to column 6, line 4); the zoom lens within a lens barrel (column 10, lines 56-62); the lens barrel undergoing a sinking operation into a zoom lens system body (column 8, line 10); the zoom lens system within an image pick-up device to convert the image into an electronic signal (column 1, lines 10-21); and the satisfaction of the mathematical condition of claims 2 and 4 (example 3 with fa/fw = 3.0).

Hagimori discloses as is set forth above including disclosing the zoom lens system comprising a mirror in the first lens group with an object side negative lens sub-component (figure 3, example 3, column 8, lines 37-49) and that the zoom lens system can be within a lens barrel that undergoes a sinking operation into the lens barrel (column 8, lines 10-30) but does not specifically disclose the reflection member withdrawn in parallel from the optical axis during the sinking operation and the negative lens subgroup accommodated into the space vacated by the withdrawn member. Mihara'599 teaches that in a zoom lens system comprising a mirror in the first lens group with an object side negative lens sub-component and that the zoom lens system can be within a lens barrel that undergoes a sinking operation into the lens barrel (figures 5, 17 and 33, column 1, lines 10-15, column 9, lines 1-14, column 35, line 43), that the reflection member can be withdrawn in parallel from the optical axis during the sinking operation and the negative lens subgroup can be accommodated into the vacated space for the purpose of providing a system that provides a greater

thickness reduction (column 9, lines 1-14, column 29, lines 29-36, figures 16 and 17). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the zoom lens system of Hagimori having the reflection member withdrawn in parallel from the optical axis during the sinking operation and the negative lens subgroup accommodated into the space vacated by the withdrawn member since Mihara'599 teaches that in a zoom lens system of similar structure, it is desirable to have the reflection member withdrawn in parallel from the optical axis during the sinking operation and the negative lens subgroup accommodated into the space vacated by the withdrawn member for the purpose of providing a zoom lens system having a greater thickness reduction.

***Response to Arguments***

Applicant's arguments filed May 26, 2009 have been fully considered but they are not persuasive. Specifically, applicant first argues that Mihara does not disclose the withdrawal of the mirror in parallel from the optical axis. The examiner disagrees. Figures 16 and 17 specifically disclose by the doting line the mirror being moved to a location in parallel from the optical axis of lens elements "L2" and "L3" re being "withdrawn in parallel from the optical axis". Applicant further argues that the movement of the mirror of the present application is not limited to the rotation of the mirror as disclosed in Mihara and that Mihara merely discloses rotation as a means of moving the mirror. However, applicant is arguing a limitation that has not been claimed. There is nothing within the independent claims to claim that the withdrawal of the mirror is by other than

rotation. Specifically, applicant is broadly claiming "withdrawn in parallel to the optical axis" (which is disclosed by Mihara) but is not claiming that this withdrawal is by a means other than rotation. Regardless, as stated in the 112 enablement rejection above, applicant's specification does not provide support for the means of moving the mirror other than by rotation about the fulcrum.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordan M. Schwartz whose telephone number is 571-272-2337. The examiner can normally be reached on Monday to Friday from 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jordan M. Schwartz
Primary Examiner
Art Unit 2873
August 7, 2009

/Jordan M. Schwartz/
Primary Examiner, Art Unit 2873